

NEW GENERA AND SPECIES OF ACARINA FROM BATS FROM NEW GUINEA, PHILIPPINES AND AUSTRALIA

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Text Fig. 1-3.

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SUMMARY

Three new species of mites belonging to two new genera of the family Laelaptidae and to the genus *Neomyobia* of the Myobiidae are described. The genus *Notolaelaps* with type *nova guinea* sp. nov. is erected for a species parasitic on a small fruit-eating bat *Syconycteris crassa papuana* Matschie 1899, from the Jimmi Valley, Western Highlands of New Guinea.

Plesiolaelaps gen. nov. is proposed for the type *miniopterus* sp. nov. from bats *Miniopterus schreibersi* (Natterer, 1819) and *Nyctophilus geoffreyi* Leach, 1821; the first from Joanna, S. Aust., 10th Dec., 1932, and the second host from Sutherlands, S. Aust., 23rd August, 1955.

Neomyobia luzonensis sp. nov. is described from many specimens of both sexes as well as nymphs, from a bat from Manila, Luzon, Philippine Islands, 25th March, 1945.

Subfamily LAELAPTINAE Berlese, 1892

Genus NOTOLAE LAP S NOV.

Allied to *Neolaelaps* Hirst in having only 3 pairs of genito-ventral setae in the female, but differs in the more oval shape, in lacking the stout spines on the maxillary coxae and on coxae I, the internal posterior of the latter being represented only by a boss, and in the less expanded genito-ventral shield which is not so widely separated from the anal shield and on which the 3 pairs of setae are all marginal.

Type *Notolaelaps nova-guinea* sp. nov.

Notolaelaps nova guinea sp. nov.

Fig. 1 A-C

Female Holotype.—Shape broadly oval. Length of idiosoma 520 μ . Dorsal shield entire, not completely covering dorsum but separated marginally by a fairly wide band of cuticle; dorsal setae simple, to 40 μ long. Ventrally; pre-endopodal and jugular shields wanting; sternal shield small, about as wide as long, slightly narrower posteriorly, with 3 pairs of setae and two pairs of pores; metasternal shields only represented by the setae; genito-ventral shield flask-like with 3 pairs of marginal setae and not very widely separated from anal shield; anal shield shortly pear-shaped with the usual 3 setae; between the anal and genito-ventral shields with only one pair of setae and on each side eleven setae; a pair of shortly elongate metapodal shields. Legs slender but not very long, I 325 μ , II 260 μ , III 260 μ , IV 390 μ ; no strong spines on maxillary coxae, a pronounced boss and a slender seta on coxae I, an anterior strong spine and a slender seta on coxae II and III and one seta on coxae IV; tarsi all with short caruncle and paired claws. Peritreme fairly thick with stigmata between coxae III and IV. Chelicerae simple without distinct teeth.

Locality and Host.—Described from the holotype and one paratype female from a small fruit-eating bat, *Syconycteris crassa papuana* Matschie, 1899, from the Jimmi Valley, Western Highlands of New Guinea, 1955 (coll. J. S. Womersley).

* South Australian Museum.

Remarks.—The types of this species are in the South Australian Museum. For the identification of the host I am indebted to Mr. Ellis Troughton of the Australian Museum, Sydney.

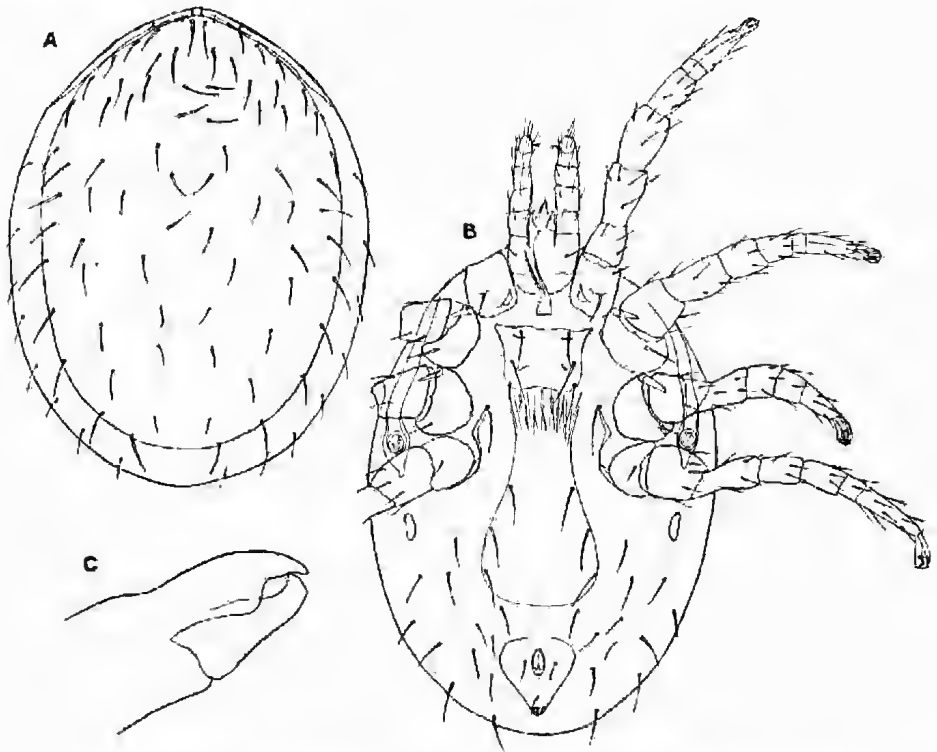


Fig. 1, A-C—*Notolaelaps novaguinea* g. et sp. nov. Female, A, dorsum; B, venter; C, chelicerae.

Genus PLESIOLAE LAP S NOV.

In adults dorsal shield entire and completely covering dorsum. Labial cornicles slender. Female without pre-endopodal or jugular shields; sternal shield wider than long with 3 pairs of setae; metasternal shield only represented by seta and pore; genito-ventral shield drop-shaped with 5 setae; anal shield rounded; chelicerae without teeth, fixed finger hyaline and thumb-like, movable finger slender and slightly hooked; no specialised armature on coxae or legs. In male with all ventral shields coalesced, moderately expanded behind coxae IV; chelicerae with fixed finger as in female, movable finger hook-like, with a long similarly hook-like spermatophore carrier; legs as in female.

Type *Plesiolaelaps miniopterus* sp. nov.

Plesiolaelaps miniopterus sp. nov.

Fig. 2 A-1

Female Holotype (as mounted in P.V.A.).—Shape oval with slightly flattened sides. Colour light yellowish. Length of idiosoma 364μ , width 240μ . Dorsal shield entire, covering the whole dorsum, with light transverse markings and short, 26μ to 32μ long spiniform setae. Venter, as figured, no pre-endopodal or jugular shields; tritosternum lightly chitinised with paired lacinia; sternal shield wider than long, with 3 pairs of slender spiniform setae to 39μ long and

2 pairs of pores; metasternal shields absent, only represented by seta and pore; genito-ventral shield flask- or drop-shaped, rounded apically, with 5 setae (two pairs and a single seta at posterior end), widely separated from anal shield with ca. 3 pairs of setae between these shields; anal shield as figured with 3

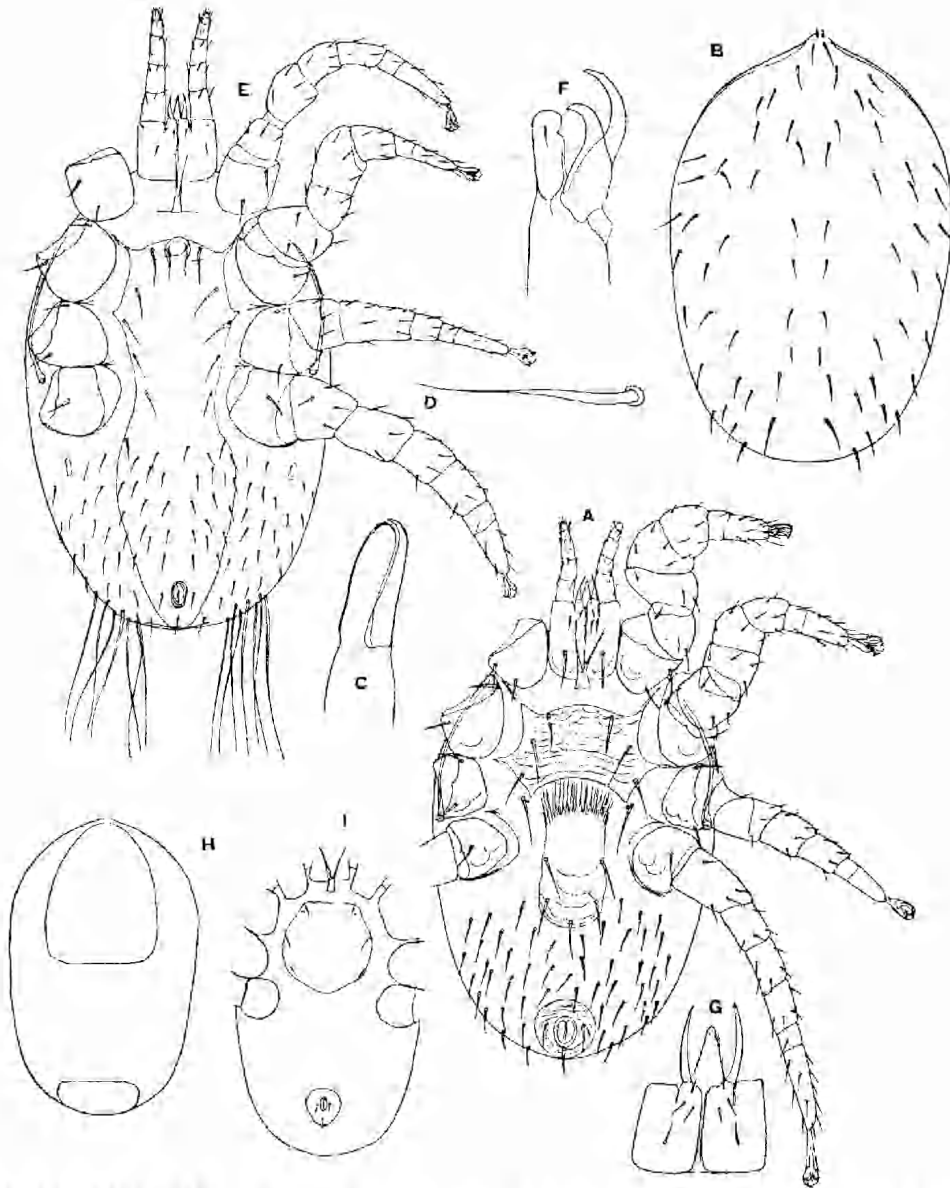


Fig. 2, A-I.—*Plesiolaclaps miniopterus* g. and sp. nov. A-D Female: A, venter; B, dorsum; C, chelicerae; D, dorsal seta. E-G Male: E, venter; F, chelicerae; G, labial cornicles. H-I Protonymph: H, dorsum; I, venter.

setae of which the post-anal is the longest; no metapodal shields could be seen in this sex. Mouth parts small, gnathosoma ventrally with 4 pairs of setae; labial cornicles slender as figured; fixed finger of chelicerae a hyaline thumb-like lobe, movable finger rather slender without teeth. Legs I and II stouter than III and IV, I 227 μ long, II 260 μ III 227 μ , IV 286 μ , without specialised setae

or armature, all tarsi with caruncle and paired claws. Peritreme narrow, extending to coxae I.

Male Allotype.—Shape as in female, but in mounted specimen slightly larger. Length of idiosoma 422μ , width 280μ . Legs: I 273μ long, II 234μ , III 247μ , IV 292μ , leg II is the stoutest but has no special armature. Dorsal shield as in female, but the setae are rather shorter to 20μ long. Ventrally, all the shields are coalesced, the genito-ventral portion of the holovertral shield is widest just behind coxae IV; a small lightly sclerotised metapodal shield lies posterior of coxae IV; the setae on the sterno-genital portion of the holovertral shield are 26μ long, while the others on the ventri-atal portion, as are those on the cuticle, are ca. 20μ long, except for a posterior fringe of 7 pairs of long slender setae to 100μ long. Chelicerae as figured, movable finger a strongly chitinised hook with a longer but similarly hooked spermatophore carrier, fixed finger a hyaline blunt thumb-like lobe as in female.

Protonymph.—Shape as in female, but weakly chitinised. Idiosoma 370μ long, 240μ wide. Dorsum with divided shield, anterior part 162μ long by 143μ wide, reaching posteriorly to level between coxae III and IV, its posterior margin widely truncate, posterior part 45μ long and 97μ wide, separated from anterior by about 4 times its own length; dorsal setae 26μ long, except the posterior pair, which are 39μ . Sternal shield as figured, 123μ long by 110μ wide, extending to nearly the middle of coxae IV; leg I 272μ long, II 253μ , III 234μ , IV 266μ . Peritreme very short, 39μ long, and not reaching beyond coxae IV.

Locality and Hosts.—Described from the holotype ♀ and allotype ♂ and paratype of each sex from a bat *Miniopterus schreibersi* (Natterer, 1819), from Joanna, S. Aust., 10th Dec., 1932 (coll. J. Hood). Other specimens from a bat *Nyctophilus geoffreyi* Leach, 1821, from Sutherlands, S. Aust., 23rd Aug., 1955 (coll. E. F. Boehm).

Remarks.—All the specimens are in the South Australian Museum.

This genus differs from all the others in the Laelaptinae in that the female genito-ventral shield has 5 setae arranged in 2 pairs and a single posterior one. It is perhaps nearest to *Radfordilaelaps* Zumpt, 1950, which has 3 genito-ventral setae and a strong knife-like seta on coxae I (not present in *Plesiolaelaps*).

Family MYOBIIDAE Ménézin, 1877

Genus *NEOMYOBIA* Radford, 1948

Neomyobia luzonensis sp. nov.

Fig. 3 A-J

Female Holotype.—Elongate species. Length of idiosoma 520μ , width 290μ . Dorsum: lateral and submedian setae moderately expanded and longitudinally striated, acuminate, without barbs; lengths, laterals I 97μ , II 162μ , III 195μ , submedian I 65μ , II 97μ , III 65μ . Venter: as in Fig. B, with the inner members of each row of setae slender and much longer than the outer members; there are two other pairs of setae near the caudal margin of which the outer members are long and slender; caudal pairs of setae 360μ long. Legs: I 78μ long, II 130μ , III 162μ , IV 175μ ; I with 4 segments, terminal one with 2 minute claws, otherwise as in genus (Figs. C, D), II-IV with paired claws, one thinner and slightly shorter than the other (Fig. A, E).

Male Allotype.—Length of idiosoma 390μ , width 200μ . Dorsum: lateral and submedian setae as in female, but the third submedians only slightly behind the second and nearer to each other; lengths of laterals I 97μ , II 162μ , III 162μ ; of submedians, I 84μ , II 65μ , III 162μ . Venter: as in Fig. 6 with all the setae short and inconspicuous, between coxae IV with a pair of stout, thick spines, 58μ long, arising from large bosses (in another specimen the right hand spine is duplicated), caudal setae 36μ long. Penis slender, reaching to coxae III and apically recurved. Legs: I 78μ long, II 162μ , III 195μ , IV 182μ ; leg I

as in female; II as in female with subequal paired claws; III (Fig. H) with only one longer and stronger claw and with two stout spurs on tibia; IV with paired unequal claws.

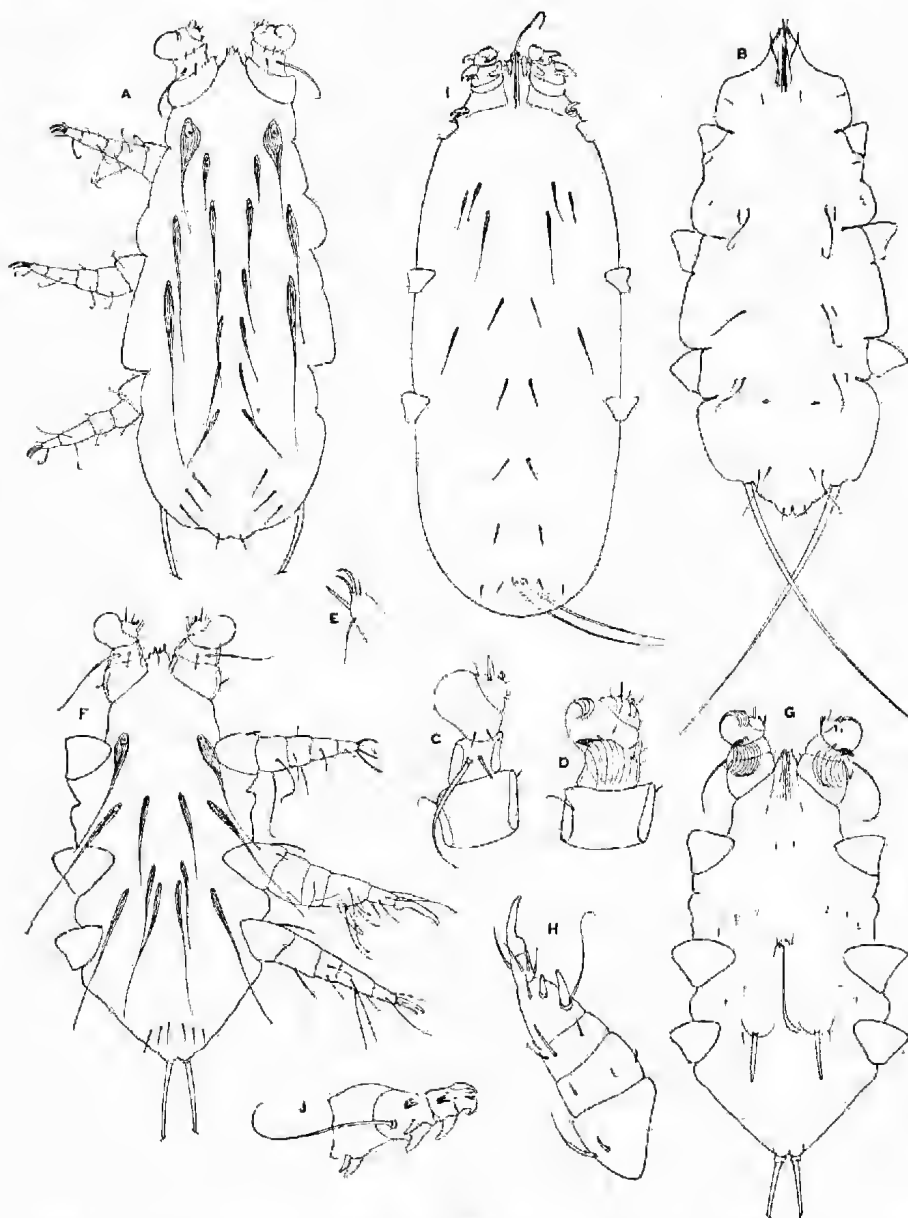


Fig. 3.—*Neomyobia luzonensis* sp. nov. A-E Female: A, dorsal; B, venter; C, leg I dorsal; D, leg I ventral; E, claws of leg II. F-H Male: F, dorsal; G, venter; H, leg III. I-J Nymph: I, dorsum; J, leg I ventral.

Nymph Morphotype.—Length of idiosoma 540μ , width 225μ . Dorsum as in Fig. I; lateral and submedial setae only slightly expanded basally; length of laterals, I 32μ , II 32μ , III 65μ ; of submedian I 65μ , II 32μ , III 30μ ; of caudals 130μ . Legs: I 70μ long, II 84μ , III 91μ , IV 97μ ; leg I as in Fig. J apparently without terminal claws; II with paired tarsal claws, III and IV with only a single tarsal claw.

Locality and Host.—The types and many paratypes from a bat, No. 21a, from Manila, Luzon, 28th March, 1945 (coll. C. B. Philip).

Remarks.—All specimens in S. Aust. Museum. Paratypes later to be distributed to other centres.

In the pair of pronounced stout spines between coxae IV on the venter of the male this species is related to *Neomyobia poppei* (Trouessart, 1895), the type host and locality for which are *Pipistrellus nathusii*. Keys and Blasius, and Marseilles, France. In the male it also differs from *poppei* in that tarsi II and IV have paired claws; according to Radford (Bull. Mus. d'Hist. Nat. Paris (2), 24 (4): 379) *poppei* has but a single claw on tarsi II, III and IV. The tibia of leg III of the male also differs from *poppei* in the presence of the two strong spurs. In the female, *luzonensis* differs little from Radford's figure of *poppei* except in the lesser expansions of the lateral and submedian dorsal setae.